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Propane Mower Incentive Program

U.S.Dept. of Energy Funding Opportunities

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## **CLEAN CITIES SURVEY Last Chance to be Counted!**

You work to save fuel every day. Join the dozens of other NH fleets that have submitted their information for 2013. It's *easy!* 

**Do it now!** Or *phone* it in: (603)271-6751!

<u>Click here to access the survey.</u> Your responses will show just how well NH is doing in its efforts to reduce petroleum.

### **Upcoming Events:**

If you are wondering about CNG, DONT MISS THIS MEETING!
GSCCC Meeting, this Friday! March 7,
2014 at Clean Energy Fuels 9:00-11:30 a.m.
(8:30-9:00 a.m. networking and refreshments)
Join us at Clean Energy Fuels' Concord Office at 49 N.
Main Street for a natural gas update! Mark Slover will present on "America's Natural Gas Highway," and Drew Drummond will provide an update on NH's newest CNG fueling station in Pembroke. Wally Dubmo, CEF's Facility and Modifications Manager will be

on hand to discuss **CNG compliant garage modifications**.

RSVP - dolores.rebolledo@des.nh.gov.

### <u>Green Your Fleet! REGISTRATION IS NOW</u> OPEN!

# Register today for the Green Your Fleet!Fleet Manager Workshop, June 6, 2014, Laconia.

9 am to 4 pm. This all day event in New Hampshire's beautiful lakes region boasts a large vehicle exhibit, vendors, panels and informative sessions. **REGISTER** 

<u>HERE!</u> Want to sponsor? Contact <u>Dolores</u> Rebolledo for more information.

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## Webinar - Electric Vehicle Quarterly Discussion, March 12, 2014, 1:00 p.m.

This webinar is open to all stakeholders. Visit <a href="MyMeetings website">MyMeetings website</a> and enter conference number PW4265601 and audience passcode 2492382. Call in is 888-807-9760, participant passcode 2492382.

## CNG and Propane 1st Responders Training, April 12, 2014, Pittsford,

**VT.** 8 a.m. to 5 p.m. Vermont Fire Academy Pittsford, Vermont. Click **here** for more information.

### Alternative Clean Transportation (ACT) Expo, May 5-9, 2014, Long Beach, CA.

For more information and to register, click <u>here</u>.

## Natural Gas Vehicles - The Here and Now Technology, May 20, 2014, Portland, ME.

For more information and to register, click here.

#### News of Interest:

## GSCCC welcomes its newest stakeholders! Liberty Utilities, with

offices in Salem has joined the Coalition. Visit their website at <a href="https://www.libertyutilities.com">www.libertyutilities.com</a>.

**Revision Energy** of Brentwood has joined the Coalition.

Visit their website at <a href="https://www.revisionenergy.com">www.revisionenergy.com</a>.

# Electric Vehicle Safety for Emergency Responders Online Course.

The National Alternative Fuels Training Consortium (NAFTC) is offering a limited number of firefighter scholarships to obtain FREE online Electric Drive Vehicle First Responder Safety Training. For more information click here.

#### **FUNDING OPPORTUNITIES:**

### FY2014 Vehicle Technologies Program Wide Funding Opportunity Announcement

This Funding Opportunity Announcement contains a total of 14 areas of interest in the general areas of advanced light-weighting; advanced battery development; power electronics; advanced heating, ventilation, air conditioning systems; and fuels and lubricants. The full Funding Opportunity Announcement (FOA) is posted on the EERE eXCHANGE website at

https://eere-exchange.energy.gov.
Closing date for applications is April 1, 2014.
For more information click here.

### **QUESTION OF THE MONTH**

**Question of the Month:** What are the key terms to know when discussing propane vehicles and their fueling infrastructure?

Answer: It is important to know how to "talk the talk" when it comes to propane vehicles and infrastructure. Becoming familiar with the terms below will help you better understand these vehicles and the associated fueling infrastructure so you can ask the right questions and make informed decisions.

#### **Fuel**

**Propane** is a clean-burning, domestically produced alternative fuel that can power light-, medium-, and heavy-duty vehicles. The fuel is a colorless, odorless liquid that is stored under pressure. An odorant, ethyl mercaptan, is added to

the fuel for leak detection. Propane is also known as **liquefied petroleum gas** or **liquefied propane gas (LPG)**, or **propane autogas**. In the United States, these terms are used interchangeably.

### **Vehicle Types**

Propane vehicles work much like spark-ignited gasoline vehicles. The fuel is stored as a liquid in a relatively low-pressure tank (about 150 pounds per square inch). There are two types of propane fuel systems:

Vapor-Injected Systems: Liquid propane travels along a fuel line into the engine compartment.

The supply of propane to the engine is controlled by a regulator or vaporizer, which converts the liquid propane to a vapor. The vapor is then fed to a mixer located near the intake manifold where it is metered and mixed with filtered air before being drawn into the combustion chamber and burned to produce power, similar to gasoline. An example is the Alliance AutoGas Prins bi-fuel system.

**Liquid Propane Injection Systems:** Propane is not vaporized. Instead, it is injected into the combustion chamber in liquid form. Examples are the CleanFUEL USA and Roush CleanTech technologies.

Propane vehicles are available in the following configurations:

**Dedicated Vehicle:** These vehicles are designed to run on only propane and are used in light-, medium-, and heavy-duty applications.

**Bi-Fuel Vehicle:** These vehicles are able to run on either propane or gasoline because they have two separate fueling systems. Bi-fuel vehicles include lightduty models and, more recently, medium- and heavy-duty vehicles. Please note that some agencies may use the term **dual-fuel** to describe bi-fuel vehicles. However, Clean Cities uses dual-fuel to describe vehicles that have fuel systems that run on alternative fuel and use diesel fuel for ignition assistance. By this definition, there are not currently any dual-fuel propane systems available.

The power, acceleration, and cruising speed of propane vehicles, whether they are dedicated or bi-fuel, are comparable to those of gasoline vehicles.

### **Fueling Infrastructure Components**

Propane fueling infrastructure is very similar to gasoline equipment, including:

**Storage Tank:** Propane is brought to the station via a transport truck and put into on-site storage—traditionally an aboveground storage tank on a concrete pad.

Pump and Fuel Dispenser: The main difference between a propane fueling dispenser and a gasoline dispenser is that propane is delivered to the vehicle under pressure so it remains a liquid. When the vehicle tank is full, the dispenser stops automatically just like a gasoline dispenser.

Credit Card Reader: A card reader is necessary for a public station accepting payment. Note that federal regulations require a "competent attendant" to fuel propane vehicles, so drivers may need to be trained before they can use an unmanned pump (Title 29 of the Code of Federal Regulations, section 1910.110; National Fire Protection Association (NFPA) 58 and 54).

Fueling stations may fall into one of the following categories:

**Skid-Mounted:** The storage tank, dispenser, pump, and any additional piping or controls are mounted to a portable concrete or steel frame that can be installed easily, removed, or relocated. Skid-mounted systems tend to be more affordable than stationary equipment.

**Stationary:** In a stationary system, the storage tank may be underground, and the station may include additional features not available on a skid-mounted system, including spill-proof pumps and additional metering capabilities.

More information on propane vehicles and infrastructure

can be found on the Alternative
Fuels Data Center (AFDC) Propane website
(<a href="http://www.afdc.energy.gov/fuels/propane.html">http://www.afdc.energy.gov/fuels/propane.html</a>)
and the Propane Education & Research Council website
(<a href="http://www.autogasusa.org/">http://www.autogasusa.org/</a>).

Clean Cities Technical Response Service Team technicalresponse@icfi.com 800-254-6735

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